were grouped so as to show those injurious and those beneficial to agriculture.

There were probably other collections of insects in the buildings, but there being no official catalogue to guide the visitor, there was great difficulty in finding them.

REMARKS ON SOME SPECIES OF COLEOPTERA, WITH SUPPLEMENTARY DESCRIPTIONS.

BY JOHN HAMILTON, M. D., ALLEGHENY, PA.

Many of the species of Coleoptera have been described from single, or, at the most, two or three specimens; these often imperfect, immature, or with individual peculiarities. Owing to this, those who undertake to determine their insects by descriptions, even allowing a wide latitude of interpretation, are frequently in doubt and uncertainty. Where families and genera have passed through recent monographic review, the re-description of the species from better preserved or more abundant material usually obviates the difficulty, but enough still remain to give trouble.

Among these, the ones here introduced seem deserving of notice, as some further description is necessary for their identification without having recourse to friendly aid.

Toxotus Schaumii Lec. The first difficulty is the feebleness of an important generic character; to be a Toxotus the eyes must be emarginate, and they are so obsoletely so in the few individuals of this species that have come under my observation as to make this character opinionative. There are two forms of this species so unlike in color, that unless taken in close relation, they would scarcely be recognized as belonging to the same species.

When Dr. LeConte described this species (Jour. Acad. Nat. Sci., Phil., 2d series, vol. 1, p. 320), he seems to have only known one of these forms, characterizing it as "black, with whitish pubescence, legs black, femora yellowish, with base and tip black." This seems to apply to both sexes. And if the specimen in hand is of this color and recognized as a Toxotus, there is no further trouble. But should the specimen be reddish yellow, with black elytra so closely clothed with whitish grey pubescence as to conceal the color, antennæ black, with yellow basal joint, and tarsi piceous,

the diagnosis might be incorrect and induce the collector, were he ambitious in that direction, to add another synonym.

It is true, Dr. LeConte mentions, in a two-line notice, that this is a male form (Proc. Acad. Nat. Sci., 1862, p. 41); but, as the volume is not indexed, unless stumbled on accidentally the reference would escape notice. This appears to be a rare Cerambyan, and among the choicer. The specimen taken here was of the last mentioned form, being in length 1.20 inch. Heretofore it seems to have occurred only in Ohio, (LeConte, Dury).

Leptura vibex Newm. A color variety of this caused me some trouble, notice of which, if any, has escaped my attention. Dr. Horn described the species under the name *nitidicollis*, giving a fine colored figure (Proc. Acad. Nat. Sci., Phil., 1860, p. 570 and plate 8). Normally it is black, with the mouth parts and a narrow marginal and medium stripe (subject to variation) yellowish; legs rufous; femora with the distal end black, or not. This describes the form found here. The other form previously alluded to corresponds also with this description, except that the thorax is entirely yellow. I took it in Ohio, forty miles westward from here, but did not find the other form there, so that perhaps it is a local race. The species appears to be distributed from Northern Michigan through Canada and southward to Virginia. The variation in the extent of the elytral stripes is considerable; in some individuals the marginal one is obsolete and the dorsal reduced to a mere line; in others they are dilated so as to leave only a narrow sutural and lateral stripe black; and some may possibly be found with the elytra entirely black, or entirely yellow.

Rhinoncus longulus Lec. is common and very abundant, occurring from Florida to Michigan, and also in California (LeConte.) Here it feeds exclusively on Polygonum virginicum Lin., a plant growing in open woodlands, the leaves of which it perforates. Its season of greatest abundance is late in June, but it may be found sparingly till September. Though so common, it does not seem to be well recognized, no insect being oftener given in exchange. This is probably because the description (Rhyncoph. N. A., p. 284) only applies to rubbed or alcoholic specimens, omitting much of the vestiture as met with in life. In addition to Dr. LeConte's description—"thinly clothed with small white scales; more dense, forming a short posterior-dorsal line on the prothorax, and an elongate sutural spot at the base of the elytra"—there is also an elon-

gate sutural spot extending from the middle till near the apex, the anterior and posterior extremities of which are more or less connected with arcuate transverse lines extending to the margin, enclosing on each elytron a black spot nearly destitute of white scales; the humeri are also similarly encircled; the sides of the thorax and abdomen are likewise moderately densely clothed with white scales; the striæ are deep, wide and coarsely punctured, with narrow rugose intervals. When first taken the insect has a very pruinose appearance, but rough handling or immersion in alcohol removes nearly all the scales, except the basal spot.

Piazorhinus pictus Lec. is not very common. I have taken three specimens and have seen three others. It probably lives on Ostrya Virginica (known here as Iron-wood). It is excessively variable in the color and ornamentation of its vestiture, no two of the six examples being alike, and only one of them approximating that of the type. Dr. LeConte described the species (Monograph Rhyncoph.) from a single insect taken in Georgia, as "Testaceous, clothed with pale yellowish pubescence; head and beak dusky. Elytra with a large, rounded, common, dusky spot, extending from the base to the middle, paler within; and a dusky, oblique band more or less interrupted on the seventh interspace, which attains the suture about one-fourth from the tip." Of those I have seen, one has the beak and head leonine yellow, like the thorax; the elytra being of the same color, mottled uniformly with brown; another has the beak, head and thorax typical, but the elytra are dusky brown with a streak along the external margins and an irregular fascia near the apex, tawny yellow; another has the beak and head typical, but the thorax has a dark spot in front of the scutellum and there is a small dark spot on each elytron near the middle. The others are still differently ornamented and need not be described, as the above shows sufficiently the variableness of the species in this respect. This species is likely to prove difficult for the collector to determine so long as he has the description of only one insect to refer to, and perhaps only about one in ten of his insects agreeing with it. This is one of the many cases that goes to show that, unless to meet urgent systematic requirements, it would give better results and prevent much confusion to await the accumulation of several specimens before attempting to describe a species.

Among the errors that have become widespread in exchanges it may be of advantage to notice the following:

Microclytus gazellula Hald. has lately appeared on several exchange

lists, but in every instance (four) the specimens sent me were *Cyrtophorus verrucosus* Oliv. The descriptions of *C. gazellula* Hald. and of *Cyrtophorus gibbulus* Lec. (Lake Sup. p. 234 now united with it), show the color and markings to vary greatly individually, and to so closely approximate *C. verrucosus* as to be doubtfully distinguishable, and the separation must be made by reference to generic characters. In *Microclytus* the second joint of the antennæ is as long as the fourth; while in *Cyrtophorus* the second joint is short, and the third is longer than the fourth, (Class. Coleopt.) No weight should be attached to color or markings for the separation of these two species.

Anthonomus cratægi Walsh, which is common and abundant on many kinds of blossoms, especially wild cherry and laurel, is always sent me for *A. rubidus* Lec., which species I have not yet obtained. There should not be much trouble in distinguishing them, as *cratægi* has only six joints in the funicle of the antenna, while *rubidus* has seven—a matter readily determined by counting them under a microscope.

Elater protervus Lec. has been united with *semicinctus* Rand. and *Cryptobium latebricola* Nord. with *pallipes* Grav., both of which have always been troublesome to collectors.

There are many other names on the list that deserve the same treatment, and will, no doubt, eventually be united as the variations in color, size and sculpture within specific limits become better known.

SEASIDE CAPTURES.

BY FREDERICK CLARKSON, NEW YORK CITY.

I visited Fire Island, Rockaway Beach, Long Beach and Coney Island during the seasons of 1883 and 1884. Found myriads of *Cicindela hirticollis* and *dorsalis*, Say. The beaches were fairly alive with these beetles. The *hirticollis* were most abundant in the latter part of June and early part of July, and *dorsalis* at the end of July and beginning of August. These beetles may be found throughout the length of these beaches. They have a singular habit of collecting in great numbers at certain points, where in spaces of about fifty feet square they are as numerous as flies about a stable. This was frequently observed, and so far as the general character of the beach and the surroundings were con-